

REMARKS/ARGUMENTS

Claims 1-12, 14 and 16-30 are now canceled. Independent Claim 13 (amended) and dependent Claim 15 are now in the case.

Claim 13 has been amended to insert a grammatical correction ("a"). Claim 13 has been further amended to recite compositions comprising sodium or potassium lauryl sulfate (and mixtures thereof) and to recite the ethanol as optional. Basis for the optional ethanol is at p. 10, l. 10 and in original Claim 2 (g). Basis for the lauryl sulfate is found in the Examples, as discussed hereinafter. It is submitted that the amendments are fully supported, and entry is requested.

Rejections Under 35 USC 103

Claims 13, 15, 20, and 21 stand rejected under §103, over U.S. 5,549,758, in view of U.S. 4,808,330. (U.S. 5,509,968 is cited to show a universal fact.)

Applicants respectfully traverse the rejections based on the combination of '330 and '758, to the extent they may apply to Claims 13 (amended) and 15, now in the case.

The present invention is, in part, based on the discovery that the antimicrobial efficacy of a sodium or potassium lauryl sulfate solution at high pH can be significantly enhanced by the presence of certain levels of cations in the solution.

In this regard, attention is directed to the data presented at pages 15-21 of the specification.

The Comparative Examples A and B illustrate antimicrobial results against E-Coli bacteria in solutions which contain no surfactant. As can be seen from the "Log reduction E-Coli" results of 0.29 and 0.23 @ 1 minute, scant antimicrobial effect is achieved.

Comparative Example C illustrates that only a very slight antimicrobial effect is achieved even when sodium lauryl sulfate and cations are both present in the treatment solution, but in amounts below the limits of the present claims (Log reduction E-Coli 0.05).

Similar, poor antimicrobial results are secured with oleic acid (Comparative Example D) and even with sodium lauryl sulfate when the cation molarity is insufficient – see Comparative Examples E, F, G, and H, all of which have a Log reduction E-Coli of 0 at one minute.

In sharp contrast, Examples A-R illustrate how properly formulating the surfactant [lauryl sulfate, lauric acid, or a mixture of lauryl sulfate and oleic acid (Example R)], at the proper concentration and with the proper cation molarity yields much greater antimicrobial activity than the aforesaid Comparative Examples, with Log reductions in the range of 1.5 to as high as 7.

The present claims focus on methods which employ compositions comprising the lauryl sulfate surfactant and the cations, both being present at the antimicrobially effective levels demonstrated in the Examples.

Turning to the documents cited in the Office Action, it is noted that nothing in the '330 patent teaches or suggests the use of surfactants in the disclosed compositions. In particular, nothing therein suggests that solutions comprising lauryl sulfate surfactant could, or should, be formulated with cations at the levels required herein to achieve an antimicrobial effect. While the claims of '330 may be "open," the suggestion to use lauryl sulfate surfactant is not thereby embodied in either the disclosure or the claims.

Likewise, it is submitted that nothing in the '758 patent teaches solutions comprising lauryl sulfate surfactant, much less suggests the need for the conjoint presence of cations therewith, all at the levels claimed herein, in order to achieve the desired antimicrobial benefit. While dodecylbenzene sulfonate (Col. 3, l. 13 and Col. 9, l. 14), and 2-ethylhexyl sulfate (Col. 9, l. 17) are noted (also various fatty acid soaps, especially oleic – Examples I, II, and III), nothing therein teaches or fairly suggests lauryl sulfate when used in the manner of the present invention.

In addition, the '968 patent adds nothing to the foregoing documents, with respect to the amended claims now in the case.

Moreover, nothing in the combination of '330 and '758 (nor '968) suggests the present invention. Nothing in '330 in any way relates to the use of surfactants in the disclosed compositions, much less lauryl sulfate, and still less at the concentrations used herein. Nothing in '758 suggests combining lauryl sulfate as a surfactant, at the level required herein, with the cations of '330, at the levels required herein, in order to achieve an improved antimicrobial benefit.

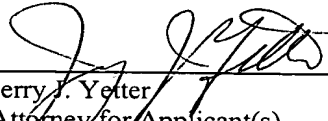
In summary, it is submitted that the data presented in the specification demonstrate that the use of lauryl sulfate surfactant and cations, at the levels specified in the claims herein, provides a unique antimicrobial benefit nowhere suggested in the cited combination of '330 and '758. Moreover, it is submitted that nothing in the combination of '330 and '758 teaches or suggests that such benefits could be secured. Reconsideration and withdrawal of the rejections on this basis are therefore requested.

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In light of the above, early and favorable action in the case is respectfully requested.

Respectfully submitted,

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